

# Creating a distributable package



(using GNU Autotools)

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# Motivation

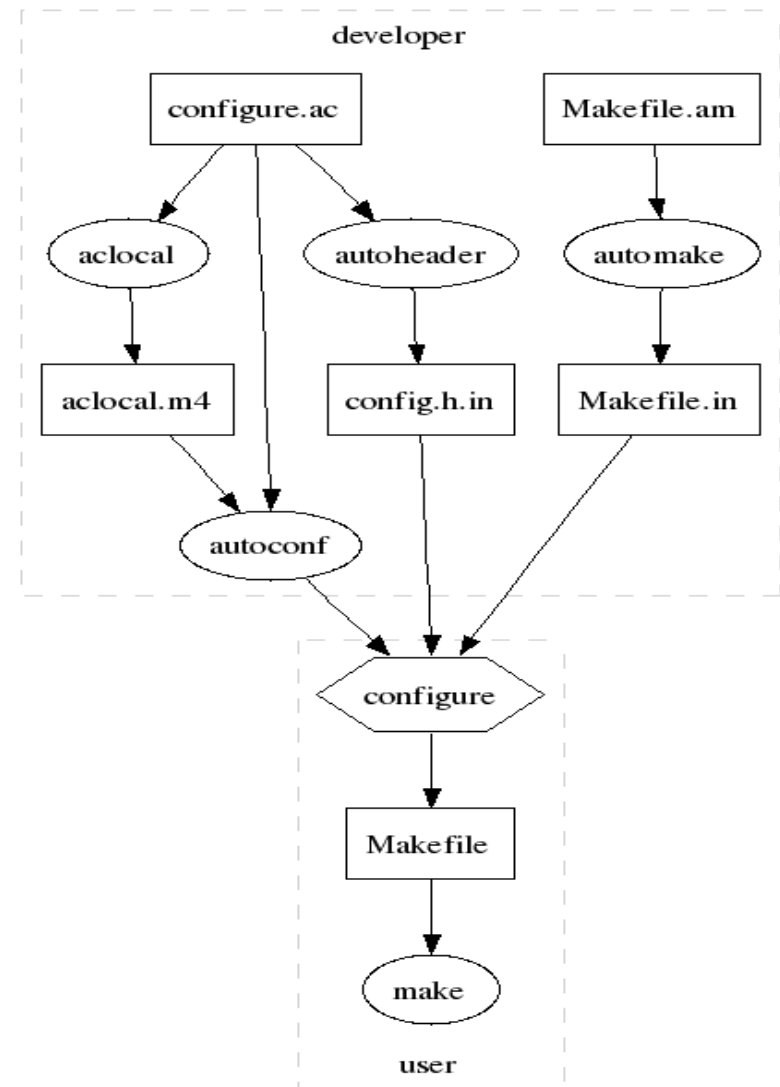
- Ease the process of distribution
- Different Makefiles depending on the platform:
  - Compile the code
  - Move every file to its correct location
  - Clean up after build

# How Autotools help

- Provide tools to create a Build System, from simple instructions:
  - Portable
  - Complete
  - Self-contained
- Bug-fixes for portability issues are centralized

# Autotools flowchart

- Creating a tar ball:
  - autoscan -> configure.ac
  - aclocal -> aclocal.m4
  - autoconf -> configure
  - automake -> Makefile.in
- Installing a tar ball:
  - ./configure [tons of options]
  - make



# Configure.ac

- 'autoscan' to draft a preliminary file

```
##                                     -*- Autoconf -*-
# Process this file with autoconf to produce a configure script.

AC_PREREQ([2.67])
AC_INIT([FULL-PACKAGE-NAME], [VERSION], [BUG-REPORT-ADDRESS])

# Checks for programs.

# Checks for libraries.

# Checks for header files.

# Checks for typedefs, structures, and compiler characteristics.

# Checks for library functions.

AC_CONFIG_FILES([Makefile])
AC_OUTPUT
~
~
~
~
~
"configure.scan" 18L, 426C
```

# Configure.ac

- Make sure to add:

*AM\_INIT\_AUTOMAKE*

- A minimal configure.ac:

---

```
AC_INIT([Name], [Version])
AM_INIT_AUTOMAKE
AC_CONFIG_FILES([Makefile])
AC_OUTPUT
```

# Makefile.am

- Minimal Makefile for scripts:

*dist\_bin\_SCRIPTS=myscript.sh*

- Minimal Makefile for programs.:

*bin\_PROGRAMS=myprogram*

*myprogram\_SOURCE=myprogram.c*

# Adding a man page

- Makefile instructions for a man page e.g:

```
dist_noinst_DATA = nospaces.pod
man_MANS = nospaces.1
nospaces.1: nospaces.pod
    pod2man -c 'User Commands' -r "$(VERSION)" $< $@
clean-local:
    rm -rf nospaces*

~
~
"Makefile.am" [Modified] line 7 of 7 --100%-- col 1
```

# Adding a man page

- Final Makefile.am incl. man page e.g:

```
AUTOMAKE_OPTIONS = foreign
dist_bin_SCRIPTS=rmsp.pl
man_MANS=rmsp.1
rmsp.1: rmisp.pl
        pod2man -c 'remove spaces' $< $@
clean-local:
        rm -rf rmisp.1
~
~
~
~
~
~
~
~
"Makefile.am" [Modified] line 8 of 8 --100%-- col 1
```